

Reasons For Allowance

The **combination** as claimed wherein an apparatus for detecting a concentration and a remaining amount of a liquid reducing agent comprising a sensing unit disposed in a storage tank that stores a liquid reducing agent for outputting a signal in relation to a concentration and a remaining amount of the liquid reducing agent based on a heat transfer characteristics between two points distant apart from each other (claims 2, 3, 5, 8) is not disclosed, suggested, or made obvious by the prior art of record.

Nishina et al. (EP 1 688 598) discloses a concentration sensor which detects the concentration of a liquid reducing agent based on a heat transfer characteristic between two spaced positions (Abstract, lines 1-3). However, Nishina et al. does not disclose detecting a remaining amount of the liquid reducing agent based on a heat transfer characteristics between the two spaced positions.

Masakazu et al. (JP 04-282433) discloses a method and apparatus for measuring a concentration of a liquid (Title) using the temperature of a heating body and that of the liquid (Constitution, lines 15-17). However, Masakazu et al. does not disclose detecting a remaining amount of the liquid reducing agent based on a heat transfer characteristics between two spaced positions.

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Taiji (JP 2001-020724) discloses a urea concentration detection means (Solution, lines 10-11), a temperature sensor (13) for detecting the temperature of a urea solution, and a calculation means (10) for calculating the urea concentration based on the detected values of the two sensors (Solution, lines 10-16). However, Taiji does not disclose detecting a remaining amount of the urea solution based on a heat transfer characteristics between two spaced positions.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P Nghiem whose telephone number is (571) 272-2277. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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